AMENDMENTS TO THE CLAIMS

Please amend Claims 20, 25, 26, 27, 48, 59-63, 65, 67, 68, 70, 74-76, 78-79, 81-85, 87, 89, 90, 92, 96-100, 102, 104, 105, and 107 as follows:

1-19.   (Canceled).

20.   (Currently Amended) A process for a digital video recorder, comprising the steps of:

storing a plurality of multimedia programs in digital form on a storage device;

displaying a list of previously recorded multimedia programs stored on said storage device to a user;

wherein the user selects previously recorded multimedia programs from said list;

simultaneously playing back at least one of said selected previously recorded multimedia programs and a multimedia program whose storage is in progress to at least one display device using identifying information generated by the digital video recorder for at least one video segment in said at least one of said selected previously recorded multimedia programs and identifying information generated by the digital video recorder for at least one video segment in said multimedia program whose storage is in progress; and

wherein said playing back step allows playback rate and direction of each multimedia program to be controlled individually and simultaneously to perform any of: fast forward, rewind, frame step, pause, and play functions.

21.   (Previously Presented) The process of Claim 20, wherein said playing back step converts said at least one of said selected multimedia programs and said multimedia program whose storage is in progress into display output signals;

22.   (Previously Presented) The process of Claim 21, further comprising the step of:

inserting on-screen displays into a display output signal.

23.   (Previously Presented)   The process of Claim 20, wherein a user controls

playback rate and direction of a multimedia program through a remote control.

24.   (Original)   The process of Claim 20, further comprising the step of:

providing a multimedia recording device, wherein said playing back step sends a

multimedia program to said multimedia recording device, allowing a user to record said

multimedia program.

25.   (Currently Amended) The process of Claim 20, further comprising the step of:

providing editing means for creating custom sequences of video and/or audio

output; and

wherein said editing means creating step allows any number of video and/or audio

segments of multimedia programs to be lined up and combined and stored on said storage

device.

26.   (Currently Amended) The process of Claim 20, further comprising the steps of:

providing a plurality of input signal tuners;

wherein said tuners accepting analog and/or digital multimedia program signals

using a plurality of input signal tuners;

wherein each of said tuners is individually tuned to a specific multimedia

program; and

converting analog multimedia programs into a digital representation.

27.   (Currently Amended) The process of Claim 26, further comprising the step of:

providing means for synchronizing video and audio components for proper

playback.

28.   (Original)   The process of Claim 26, wherein an input signal tuner receives any of: software updates or data.

29-47. (Canceled).

48.   (Currently Amended) An apparatus for a digital video recorder, comprising:

a module for storing a plurality of multimedia programs in digital form on a storage device;

a module for displaying a list of previously recorded multimedia programs stored on said storage device to a user;

wherein the user selects previously recorded multimedia programs from said list;

a module for simultaneously playing back at least one of said selected previously recorded multimedia programs and a multimedia program whose storage is in progress to at least one display device using identifying information generated by the digital video recorder for at least one video segment in said at least one of said selected previously recorded multimedia programs and identifying information generated by the digital video recorder for at least one video segment in said multimedia program whose storage is in progress; and

wherein said playing back module allows playback rate and direction of each multimedia program to be controlled individually and simultaneously to perform any of: fast forward, rewind, frame step, pause, and play functions.

49.   (Previously Presented) The apparatus of Claim 48, wherein said playing back module converts said at least two of said multimedia programs into display output signals;

50.   (Previously Presented) The apparatus of Claim 49, further comprising:

a module for inserting on-screen displays into a display output signal.

51. (Previously Presented)   The apparatus of Claim 48, wherein a user controls playback rate and direction of a multimedia program through a remote control.

52. (Original)   The apparatus of Claim 48, further comprising:

a multimedia recording device, wherein said playing back module sends a multimedia program to said multimedia recording device, allowing a user to record said multimedia program.

53. (Original)   The apparatus of Claim 48, further comprising:

editing means for creating custom sequences of video and/or audio output; and

wherein said editing means allows any number of video and/or audio segments of multimedia programs to be lined up and combined and stored on said storage device.

54. (Previously Presented) The apparatus of Claim 48, further comprising:

a plurality of input signal tuners;

wherein said tuners accept analog and/or digital multimedia program signals;

wherein each of said tuners is individually tuned to a specific multimedia program; and

a module for converting analog multimedia programs into a digital representation.

55. (Original)   The apparatus of Claim 54, further comprising the step of:

means for synchronizing video and audio components for proper playback.

56. (Original)   The apparatus of Claim 54, wherein an input signal tuner receives any of: software updates or data.

57. (Previously Presented) The process of Claim 20, wherein said playing back step plays back said at least two of said multimedia programs in a picture in a picture format to a display device.

58.   (Previously Presented) The process of Claim 48, wherein said playing back

module plays back said at least two of said multimedia programs in a picture in a picture

format to a display device.

59.   (Currently Amended) A method for the simultaneous storage and retrieval of

~~audiovisual~~ multimedia information, comprising:

receiving ~~audiovisual~~ multimedia information, the ~~audiovisual~~ multimedia

information containing a plurality of video ~~frames~~ segments;

generating identifying information associated with at least one video ~~frame~~

segment ~~using a mediator that~~ :

mediat[[es]]ing video segments ~~between~~ among a storage device, a memory, and

a CPU;

storing video ~~frames~~ segments on the storage device;

displaying a list of previously stored multimedia information stored on the storage

device to a user;

retrieving at least one particular video ~~frame~~ segment from the storage device

using identifying information associated with the at least one particular video ~~frame~~

segment in response to the user selecting a previously stored multimedia information

from the list; and

wherein the storing step and retrieving step are performed simultaneously.

60.   (Currently Amended) The method of Claim 59, further comprising:

accepting a control command; and

wherein the retrieving step retrieves the at least one video ~~frame~~ segment in

response to the control command.

61. (Currently Amended) The method of Claim 59, wherein the ~~audiovisual~~ multimedia information is selected from a group consisting of: a digital television signal, an analog television signal, and a compressed digital video signal.

62. (Currently Amended) The method of Claim 59, wherein the ~~mediator~~ mediating step operates autonomously from the CPU.

63. (Currently Amended) The method of Claim 59, wherein the ~~mediator~~ mediating step frees the CPU from processing video ~~frames~~ segments.

64. (Previously Presented) The method of Claim 59, wherein the generating step operates autonomously from CPU operations.

65. (Currently Amended) The method of Claim 59, wherein the ~~mediator~~ mediating step selects a storage device among a plurality of storage devices for use in the storing step.

66. (Previously Presented) The method of Claim 59, wherein the storage device is a hard drive.

67. (Currently Amended) A method for implementing a digital video recorder, comprising:

generating identifying information associated with a plurality of video ~~frames~~ segments within a video signal received by the digital video recorder ~~using a mediator in the digital video recorder that~~ :

mediat[[es]]ing video segments ~~between~~ among a storage device, a memory, and a CPU;

displaying a list of previously stored multimedia information containing a plurality of video segments stored on a storage device to a user;

referencing particular video ~~frames~~ <u>segments</u> for display on a display device using identifying information associated with ~~the~~ particular video ~~frames~~ <u>segments in response to the user selecting a previously stored multimedia information from the list</u>; and

wherein the generating step and referencing step are performed simultaneously.

68.   (Currently Amended) The method of Claim 67, further comprising:

storing video ~~frames~~ <u>segments</u> on [[a]] <u>the</u> storage device; and

wherein the referencing step retrieves the particular video ~~frames~~ <u>segments</u> from the storage device.

69.   (Previously Presented) The method of Claim 68, wherein the storage device is a hard drive.

70.   (Currently Amended) A method for the simultaneous storage and retrieval of multimedia data, comprising:

receiving multimedia data in a buffer obtained from a set of buffers;

processing the received multimedia data;

storing processed multimedia data on a storage device;

<u>displaying a list of previously stored multimedia data stored on the storage device to a user;</u>

receiving a request for stored multimedia data <u>in response to the user selecting previously stored multimedia data from the list</u>;

allocating an available buffer from the set of buffers;

retrieving multimedia data from the storage device; and

writing the retrieved multimedia data to the allocated buffer.

71.   (Previously Presented) The method of Claim 70, further comprising:

accepting a control command that affects a rate of requests for stored multimedia data.

72.   (Previously Presented) The method of Claim 70, further comprising:

accepting a control command that affects the retrieving step's retrieval of stored multimedia data.

73.   (Previously Presented) The method of Claim 70, wherein the set of buffers is comprised of a fixed number of buffers.

74.   (Currently Amended) A recording apparatus, comprising:

circuitry for receiving ~~audiovisual~~ multimedia information, the ~~audiovisual~~ multimedia information containing a plurality of video ~~frames~~ segments;

a storage device; ~~and~~

a display module that displays a list of previously stored multimedia data stored on the storage device to a user; and

a mediator that mediates ~~between~~ among the storage device, a memory, and a CPU, the mediator:

generates identifying information associated with a video ~~frame~~ segment; and

simultaneously delivers video ~~frames~~ segments to the storage device and retrieves particular video ~~frames~~ segments in response to the user selecting a previously stored multimedia information from the list from the storage device using identifying information associated with the particular video ~~frames~~ segments.

75.   (Currently Amended) The apparatus of Claim 74, further comprising:

circuitry for accepting a control command; and

wherein the mediator retrieves the at least one video ~~frame~~ segment in response to the control command.

76.   (Currently Amended)   The apparatus of Claim 74, wherein the ~~audiovisual~~ multimedia information is selected from a group consisting of: a digital television signal, an analog television signal, and a compressed digital video signal.

77.   (Previously Presented) The apparatus of Claim 74, wherein the mediator operates autonomously from the CPU.

78.   (Currently Amended) The apparatus of Claim 74, wherein the mediator frees the CPU from processing video ~~frames~~ segments.

79.   (Currently Amended) The apparatus of Claim 74, wherein the mediator selects a storage device among a plurality of storage devices that the mediator delivers video ~~frames~~ segments to.

80.   (Previously Presented) The apparatus of Claim 74, wherein the storage device is a hard drive.

81.   (Currently Amended) An apparatus for the simultaneous storage and retrieval of ~~audiovisual~~ multimedia information, comprising:

a module for receiving ~~audiovisual~~ multimedia information, the ~~audiovisual~~ multimedia information containing a plurality of video ~~frames~~ segments;

a module for generating identifying information associated with at least one video ~~frame~~ segment ~~using a mediator that~~ ;

a module for mediat[[es]]ing video segments ~~between~~ among a storage device, a memory, and a CPU;

a module for storing video ~~frames~~ segments on the storage device;

<u>a module for displaying a list of previously stored multimedia information stored</u>

<u>on the storage device to a user;</u>

a module for retrieving at least one particular video ~~frame~~ <u>segment</u> from the storage device using identifying information associated with the at least one particular video ~~frame~~ <u>segment in response to the user selecting a previously stored multimedia information from the list;</u> and

wherein the storing module and retrieving module operate simultaneously.

82.   (Currently Amended) The apparatus of Claim 81, further comprising:

a module for accepting a control command; and

wherein the retrieving module retrieves the at least one video ~~frame~~ <u>segment</u> in response to the control command.

83.   (Currently Amended) The apparatus of Claim 81, wherein the ~~audiovisual~~ <u>multimedia</u> information is selected from a group consisting of: a digital television signal, an analog television signal, and a compressed digital video signal.

84.   (Currently Amended) The apparatus of Claim 81, wherein the ~~mediator~~ <u>mediating module</u> operates autonomously from the CPU.

85.   (Currently Amended) The apparatus of Claim 81, wherein the ~~mediator~~ <u>mediating module</u> frees the CPU from processing video ~~frames~~ <u>segments</u>.

86.   (Previously Presented) The apparatus of Claim 81, wherein the generating module operates autonomously from CPU operations.

87.   (Currently Amended) The apparatus of Claim 81, wherein the ~~mediator~~ <u>mediating module</u> selects a storage device among a plurality of storage devices for use by the storing module.

88.   (Previously Presented) The apparatus of Claim 81, wherein the storage device is a hard drive.

89.   (Currently Amended) An apparatus for implementing a digital video recorder, comprising:

a module for generating identifying information associated with a plurality of video ~~frames~~ segments within a video signal received by the digital video recorder ~~using a mediator in the digital video recorder that~~ ;

a module for mediat[[es]]ing video segments ~~between~~ among a storage device, a memory, and a CPU;

a module for displaying a list of previously stored multimedia information containing a plurality of video segments stored on a storage device to a user;

a module for referencing particular video ~~frames~~ segments for display on a display device using identifying information associated with the particular video ~~frames~~ segments in response to the user selecting a previously stored multimedia information from the list; and

wherein the generating module and referencing module operate simultaneously.

90.   (Currently Amended) The apparatus of Claim 89, further comprising:

a storage device;

a module for storing video ~~frames~~ segments on the storage device; and

wherein the referencing module retrieves the particular video ~~frames~~ segments from the storage device.

91.   (Previously Presented) The apparatus of Claim 90, wherein the storage device is a hard drive.

92.   (Currently Amended) An apparatus for the simultaneous storage and retrieval of multimedia data, comprising:

a module for receiving multimedia data in a buffer obtained from a set of buffers;

a module for processing the received multimedia data;

a module for storing processed multimedia data on a storage device;

a module for displaying a list of previously stored multimedia data stored on the storage device to a user;

a module for receiving a request for stored multimedia data in response to the user selecting previously stored multimedia data from the list;

a module for allocating an available buffer from the set of buffers;

a module for retrieving multimedia data from the storage device; and

a module for writing the retrieved multimedia data to the allocated buffer.

93.   (Previously Presented) The apparatus of Claim 92, further comprising:

a module for accepting a control command that affects a rate of requests for stored multimedia data.

94.   (Previously Presented) The apparatus of Claim 92, further comprising:

a module for accepting a control command that affects the retrieving module's retrieval of stored multimedia data.

95.   (Previously Presented) The apparatus of Claim 92, wherein the set of buffers is comprised of a fixed number of buffers.

96.   (Currently Amended)   A computer-readable medium carrying one or more sequences of instructions for the simultaneous storage and retrieval of audiovisual information, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:

receiving ~~audiovisual~~ multimedia information, the ~~audiovisual~~ multimedia information containing a plurality of video ~~frames~~ segments;

generating identifying information associated with at least one video ~~frame~~ segment ~~using a mediator that~~ :

mediat[[es]]ing video segments ~~between~~ among a storage device, a memory, and a CPU;

storing video ~~frames~~ segments on the storage device;

displaying a list of previously stored multimedia information stored on the storage device to a user;

retrieving at least one particular video ~~frame~~ segment from the storage device using identifying information associated with the at least one particular video ~~frame~~ segment in response to the user selecting a previously stored multimedia information from the list; and

wherein the storing step and retrieving step are performed simultaneously.

97. (Currently Amended) The computer-readable medium as recited in Claim 96, further comprising:

accepting a control command; and

wherein the retrieving step retrieves the at least one video ~~frame~~ segment in response to the control command.

98. (Currently Amended) The computer-readable medium as recited in Claim 96, wherein the ~~audiovisual~~ multimedia information is selected from a group consisting of: a digital television signal, an analog television signal, and a compressed digital video signal.

99. (Currently Amended) The computer-readable medium as recited in Claim 96, wherein the ~~mediator~~ mediating step operates autonomously from the CPU.

100. (Currently Amended) The computer-readable medium as recited in Claim 96, wherein the ~~mediator~~ mediating step frees the CPU from processing video ~~frames~~ segments.

101. (Previously Presented) The computer-readable medium as recited in Claim 96, wherein the generating step operates autonomously from CPU operations.

102. (Currently Amended) The computer-readable medium as recited in Claim 96, wherein the ~~mediator~~ mediating step selects a storage device among a plurality of storage devices for use in the storing step.

103. (Previously Presented) The computer-readable medium as recited in Claim 96, wherein the storage device is a hard drive.

104. (Currently Amended) A computer-readable medium carrying one or more sequences of instructions for implementing a digital video recorder, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:

generating identifying information associated with a plurality of video ~~frames~~ segments within a video signal received by the digital video recorder ~~using a mediator in the digital video recorder that~~ ;

mediat[[es]]ing video segments ~~between~~ among a storage device, a memory, and a CPU;

displaying a list of previously stored multimedia information containing a plurality of video segments stored on a storage device to a user;

referencing particular video ~~frames~~ segments for display on a display device using identifying information associated with the particular video ~~frames~~ segments in response to the user selecting a previously stored multimedia information from the list; and

wherein the generating step and referencing step are performed simultaneously.

105.   (Currently Amended) The computer-readable medium as recited in Claim 104, further comprising:

storing video ~~frames~~ segments on a storage device; and

wherein the referencing step retrieves the particular video ~~frames~~ segments from the storage device.

106.   (Previously Presented) The computer-readable medium as recited in Claim 105, wherein the storage device is a hard drive.

107.   (Currently Amended) A computer-readable medium carrying one or more sequences of instructions ~~for the simultaneous storage and retrieval of multimedia data~~, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:

receiving multimedia data in a buffer obtained from a set of buffers;

processing the received multimedia data;

storing processed multimedia data on a storage device;

displaying a list of previously stored multimedia data stored on the storage device to a user;

receiving a request for stored multimedia data in response to the user selecting previously stored multimedia data from the list;

allocating an available buffer from the set of buffers;

retrieving multimedia data from the storage device; and

writing the retrieved multimedia data to the allocated buffer.

108.   (Previously Presented) The computer-readable medium as recited in Claim 107, further comprising:

accepting a control command that affects a rate of requests for stored multimedia data.

109.   (Previously Presented) The computer-readable medium as recited in Claim 107, further comprising:

accepting a control command that affects the retrieving step's retrieval of stored multimedia data.

110.   (Previously Presented) The computer-readable medium as recited in Claim 107, wherein the set of buffers is comprised of a fixed number of buffers.